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ABSTRACT

Since 1980, Johnson County Community College (JCCC) has rapidly expanded its use of personal computers in instruction and administration. Many computers were being acquired, however, before appropriate policies, plans, and procedures were developed for their effective management. In response to this problem, the following actions were identified for initial implementation: (1) the establishment of a policy encouraging the acquisition and use of computers in academic areas; (2) the development of a strategic plan for purchasing hardware and software; (3) the preparation of rules for data use and ownership; (4) the establishment of a requirement for use projections in requests for computers; (5) the development of hardware compatibility standards; (6) the establishment of procedures for measuring the cost effectiveness and benefits of computer use; (7) the formalization of standards for justifying computer purchases; (8) the implementation of a tiered review and approval process; and (9) the creation of a support structure, including user groups, to help personnel use computers and software effectively. Subsequently, the Computer and Information Systems (CIS) Division was created to develop a college-wide academic computing plan by assessing the needs of faculty, staff, and students; translating those needs into hardware and software requirements; and generating a budget based on the requirements. After the approval of this College Information Resource Plan (CIRP) at various levels, the implementation and operation of computer-based projects may be carried out. A series of schematics and diagrams showing various phases of the development of JCCC's CIRP are appended. (MCB)

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DEVELOPING AN ACADEMIC INFORMATION RESOURCES MASTER PLAN: A PARADIGM

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DEVELOPING AN ACADEMIC INFORMATION RESOURCES MASTER PLAN: A PARADIGM

Using personal computers at Johnson County Community College encompasses a broad range of uses and technology. From data entry to controlled robots, computers are being used as tools as well as creative devices. Across the campus personal computers are being used for information retrieval, office automation, computer managed instruction, and computer aided instruction. All of these uses have high payoff potential for improving instruction and productivity at the college. For example, introducing automated processes driven by personal computers has allowed us to handle increased college enrollment, faculty, and course offerings without a proportional increase in support staff.

Increased use of personal computers for both education and administration has been rapid. From one personal computer in 1980 to 150 in 1984 there are now over 400 in use in the academic branch alone. The payoffs were good and the new technology was exciting, but by early 1986 problems were beginning to arise. Simply stated, personal computers were being acquired before appropriate policies, plans, and procedures were developed to manage these computers. The college had been discussing the potential benefits of using personal computers, yet was unprepared for the rapid influx of these computers (and the supporting software) in the academic area. We knew that with experience and over time, management techniques and practices would evolve to support these computers, however we also knew that some things could not wait.

The problems were studied to determine what could be done now to provide a basis for future college wide policies, plans, and procedures. The following initial actions were recommended.

Establish a policy that encourages the acquisition and use of computers in academic areas, especially where faculty and students will be the primary users. This policy must not restrict, or force the use of computers, but rather let the computers find their own use level within established plans and procedures.

Develop a strategic plan for the purchase of computer hardware and software. This will provide a direction for academic computing and generate college wide interest in identifying applications with a high potential payoff without feeling boxed in by extensive red tape.

Establish a set of rules to control the use of data by identifying data which are college reserved and developing the concept of data ownership.

Establish a requirement that during the justification process the requestor must project future data communications needs for his project. Also, any newly purchased computer should have the capability to interconnect with any existing or projected data communication network.

Create standards to ensure compatibility within functional areas and to provide interconnection between all areas of the college. Communication protocols and interfaces must be mandated. Within groups, specific operating systems, authoring programs and applications must be standardized to ease data exchange and to reduce training and software maintenance. Encourage the use of "off the shelf" CAI software rather than in-house written software. Establish a standard hardware architecture. And finally, develop a "college approved" hardware and soft-

ware list.

Set up an evaluation procedure to determine the cost effectiveness of personal computers. For those academic projects that do not lend themselves to cost analysis, set up a system to monitor the accomplishments, methods used, and lessons learned.

Set up a justification procedure where at a minimum, the following information should be provided by the requestor:

- a concise statement of what is to be done,
- the objective to be achieved by using a computer,
- the scope of the project,
- any performance criteria for project evaluation,
- the resources needed to complete the project,
- alternatives to the project,
- an action plan,
- any special funding sources.

Implement a tiered review and approval process for computer hardware and software purchases. Allow for review and approval at the Coordinator, Division Director, Dean, and Vice President levels.

Develop a support structure to:

- provide personnel to help first time users get started,
- provide advice concerning hardware, software, local networks, and design and programming techniques,
- establish and enforce network standards,
- provide a software clearing house,
- provide a means to assist the users in solving problems,

> and provide educational tools for the personal computer user.

Continue the current computer literacy program. In addition, target specific disciplines by providing information about current uses of computers in those disciplines.

Establish user groups and let them develop there own ground rules for using "college standard" software. Central control must be retained in the area of data communications, reserved systems, and "College Data." However, the college will benefit by their input in all areas.

Based on these recommendations the Computer and Information Systems Division has been created with a mandate to develop an academic information resource plan.

This plan encompasses all academic computing for faculty, staff, and students. The management system section of the plan addresses strategic planning, project planning, project approval, budgeting, procurement, reporting, and project evaluation. The goal is to improve the effectiveness of information resource management in academic computing.

The planning process has three phases: planning and development, review and approval, and implementation and operation. In the planning and development phase we determine the needs of the faculty, staff and students and their roles within the academic environment. These needs are then translated into hardware and software requirements for academic computing. The needs and requirements become part of the strategic plan and the associated project plans. The academic computing budget requests are generated from these requirements. The resulting document

along with current hardware and software inventories become the College Information Resource Plan (CIRP).

During the review and approval phase the CIRP is approved at various levels within the college. Once approved by the Vice President the CIRP becomes the academic computing budget and is submitted to the Resource Allocation Committee for their action. The college budget is then forwarded to the Board of Trustees for their review and approval. Eventually the budget requests becomes the operating budget.

Once the budget is approved, we begin the implementation and operation phase. The requested hardware and software are ordered and when delivered installed. Next the projects are started and managed. Periodically, evaluations are conducted to determine the success of the projects in the academic environment.

The CIRP itself is organized into four parts. These are the Strategic Plan, Project Plans, Academic Computing Budget Request, and Inventory of Academic Computing Resources.

The Strategic Plan is designed to spell out the College's academic computing needs and to translate these needs into information resource requirements. These requirements are then articulated into implementation strategies and plans.

The Project Plans provide the details of the individual projects that are included in the Strategic Plan.

Those funds needed to support the information resources detailed in the

Project Plans are requested through the Academic Computing Support Budget.

The Inventory of Academic Computing Resources provides the location and use of existing academic information resources for accounting and reporting purposes.

Besides managing the CIRP activity the CIS Division provides a team of programmers and analysts who help faculty and staff integrate computing technology into the curriculum. We accomplish this mainly by "one on one" activity. The CIS Division also provides computer literacy seminars through Staff Development and actively supports college user groups.

We have attempted to identify those problems involved with introducing computer technology into the academic environment at Johnson County Community College. We determined what initial actions were needed to improve the effectiveness of information resource management and set those actions in motion. We are now beginning to reap the benefits of strategic information resource planning.

ACADEMIC INFORMATION RESOURCE PLANNING

Background Environment

> Many Types of Computers

> Many Types of Software

> Pockets of Development

> Little Resource Sharing

> Technology Spreading Like Cold Sorgum

> Low Level of Computer Literacy

> No Planning for Information Resources

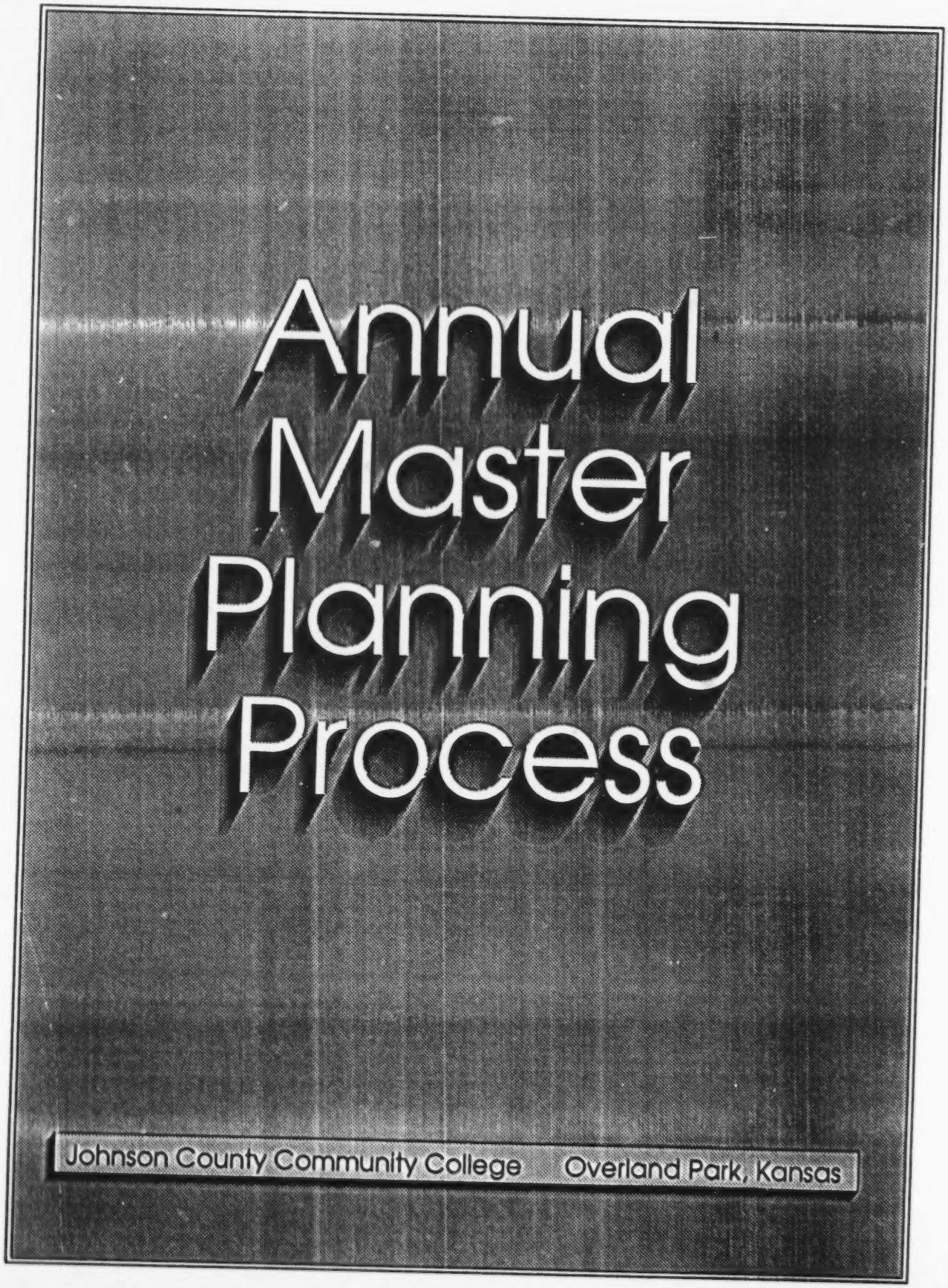
> No Specific Policy for Computer Acquisition

> Little Electronic File Transfer

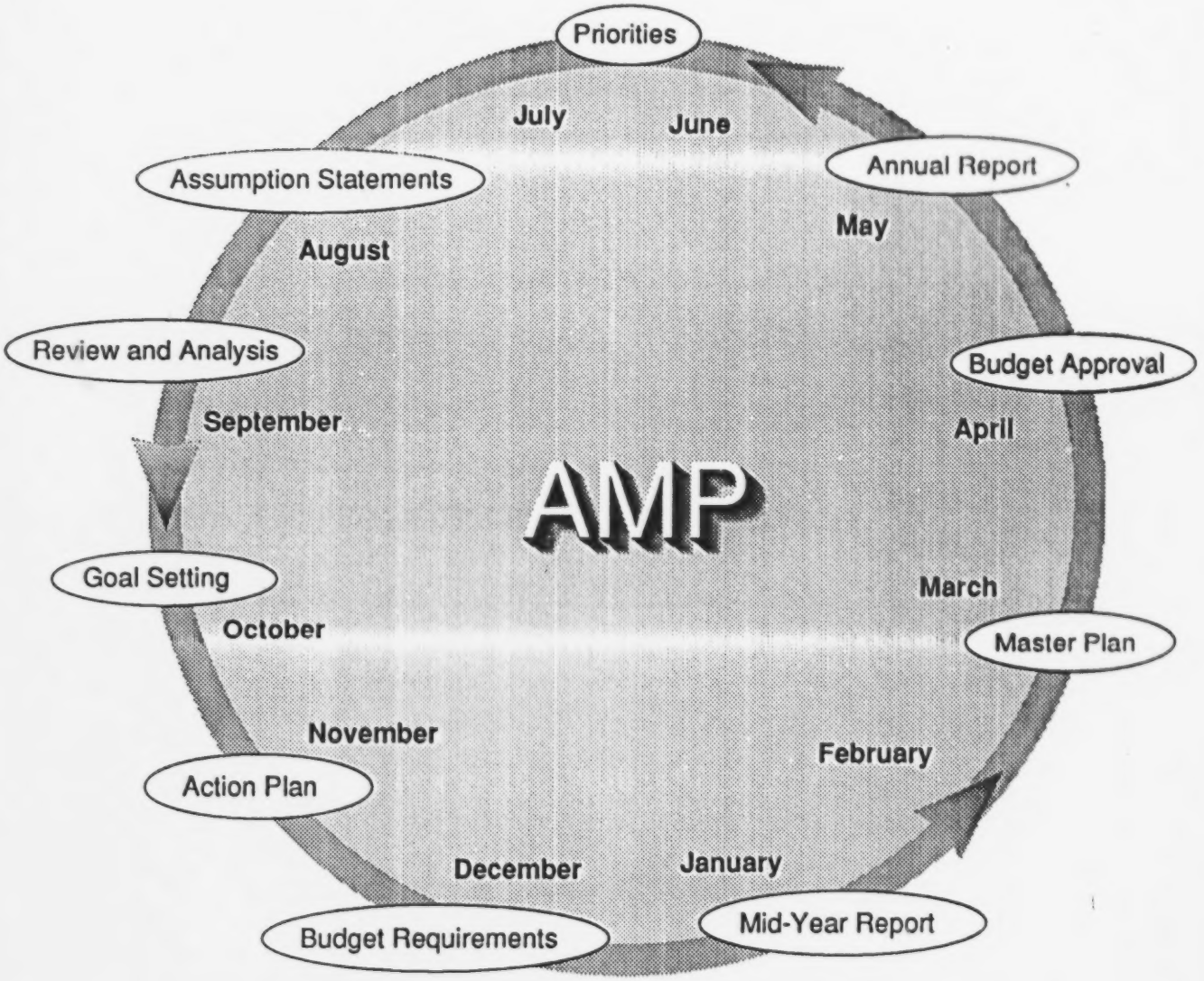
> "Acquiring Computer Resources Before Appropriate Policies, Plans, and Procedures can be Developed for Managing these Computers".

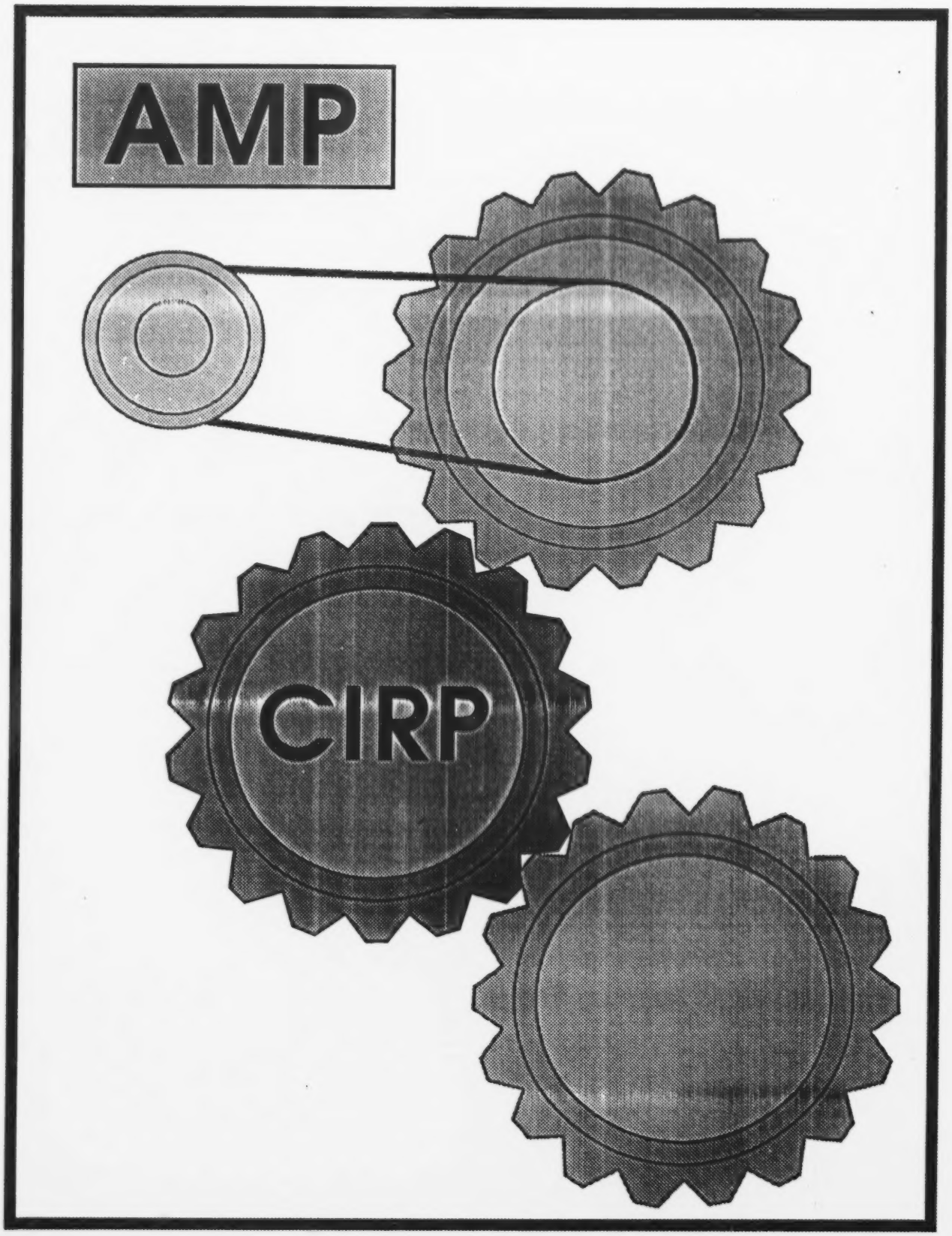
Initial Actions

+ Establish a Policy.
+ Develop a Plan
+ Establish Rules for the Use of Data
+ Establish Need for Data Communications
+ Establish Standards
+ Establish Evaluation Procedures
+ Develop Justification Process
+ Establish an Approval Process
+ Establish a Support Structure
+ Establish a Computer Literacy Program
+ Develop Users Groups

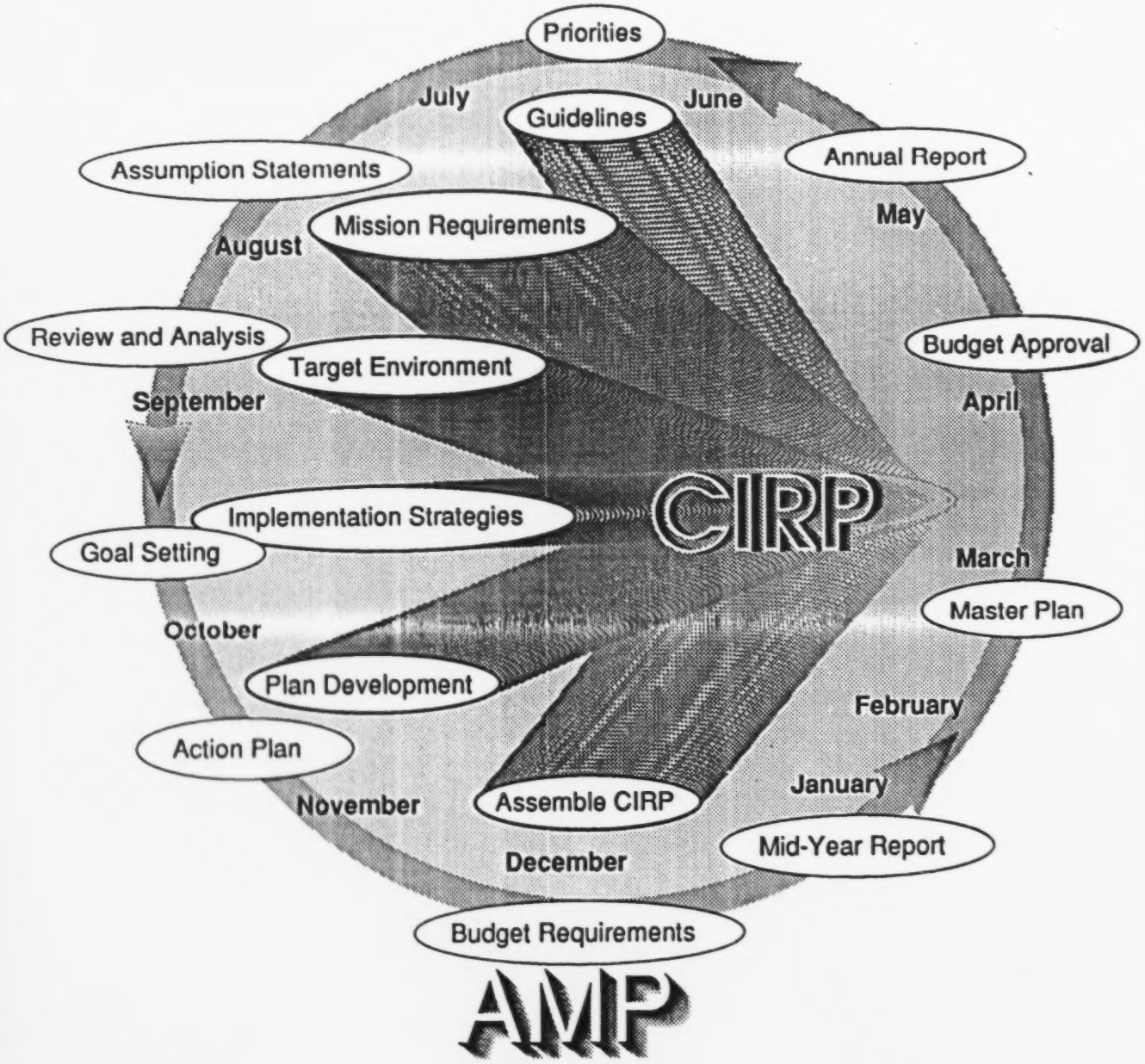

Annual
Master
Planning
Process
Johnson County Community College Overland Park, Kansas

Annual Master Planning Process

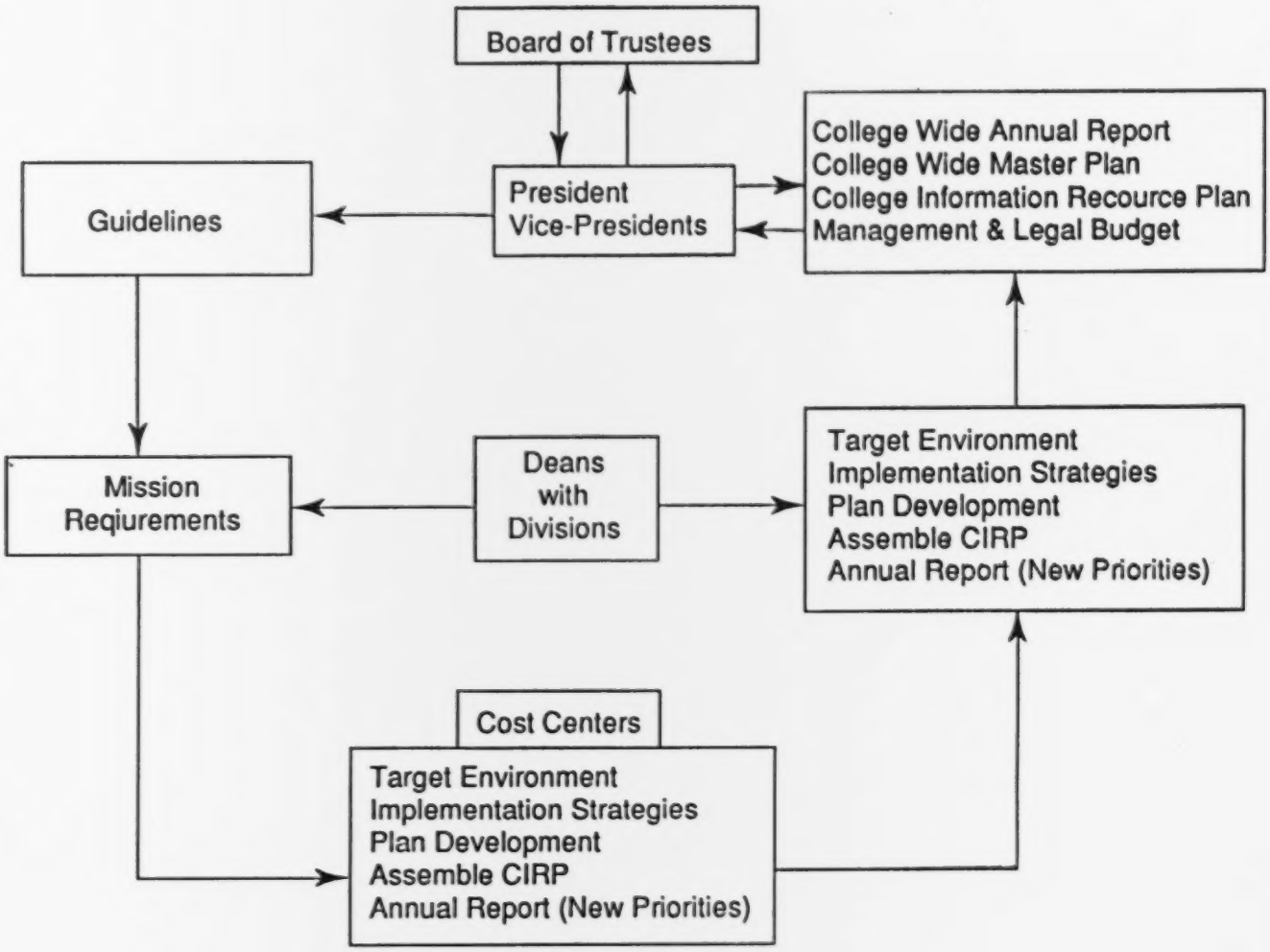


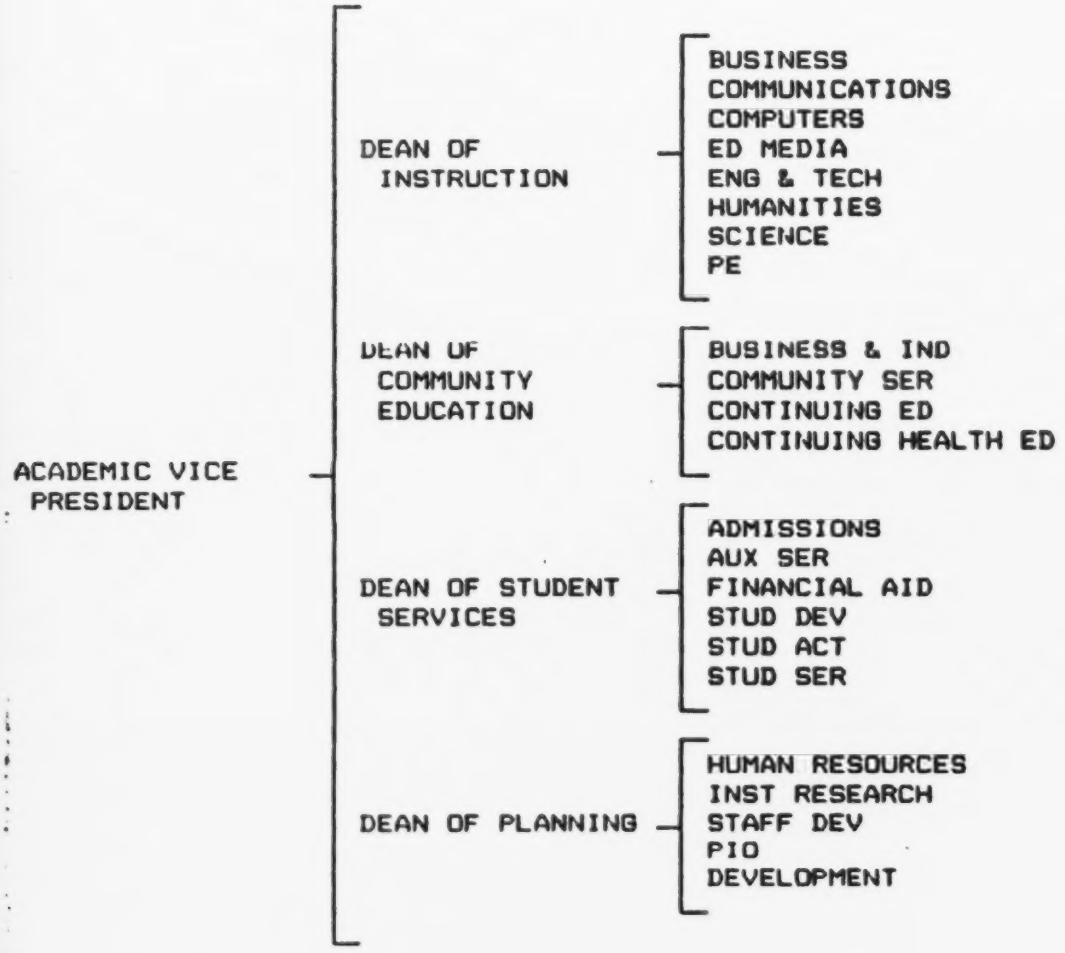

AMP
CIRP

Annual Master Planning Process



CIRP Working in the Annual Master Planning Process

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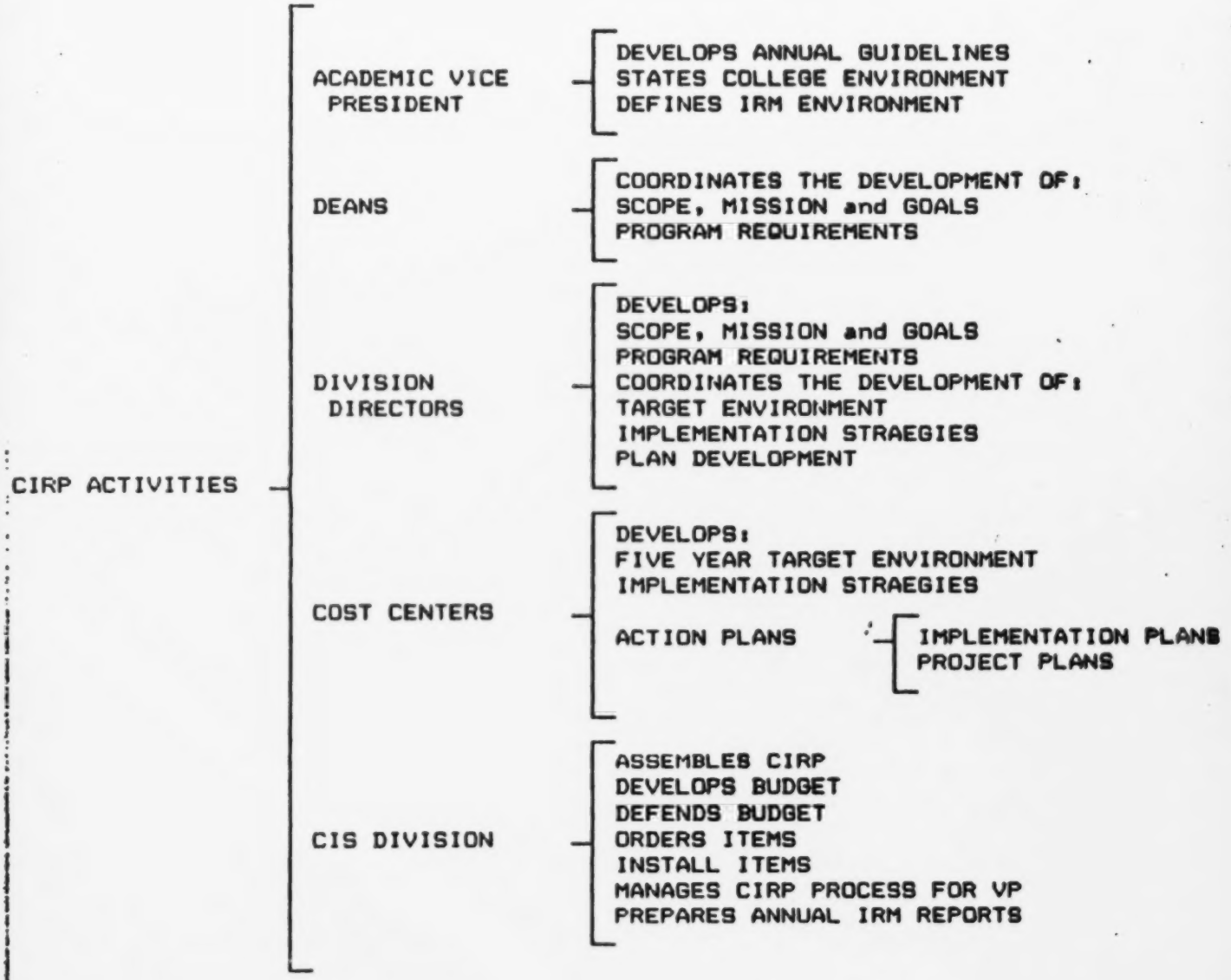
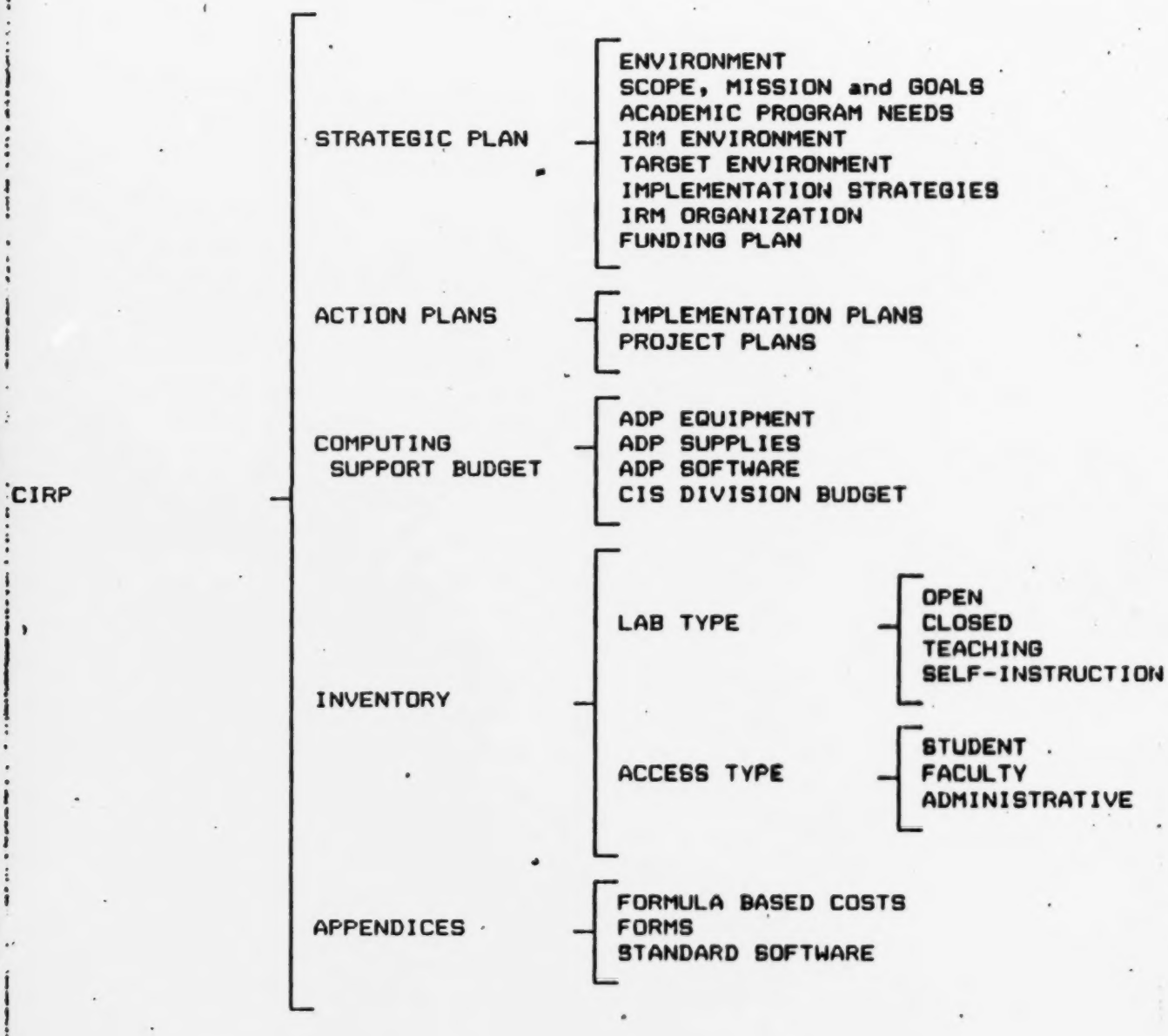

CIRP ACTIVITIES
ACADEMIC VICE PRESIDENT
DEVELOPS ANNUAL GUIDELINES
STATES COLLEGE ENVIRONMENT
DEFINES IRM ENVIRONMENT
DEANS
COORDINATES THE DEVELOPMENT OF:
SCOPE, MISSION and GOALS
PROGRAM REQUIREMENTS
DIVISION DIRECTORS
DEVELOPS:
SCOPE, MISSION and GOALS
PROGRAM REQUIREMENTS
COORDINATES THE DEVELOPMENT OF:
TARGET ENVIRONMENT
IMPLEMENTATION STRAEGIES
PLAN DEVELOPMENT
COST CENTERS
DEVELOPS:
FIVE YEAR TARGET ENVIRONMENT
IMPLEMENTATION STRAEGIES
ACTION PLANS
IMPLEMENTATION PLANS
PROJECT PLANS
CIS DIVISION
ASSEMBLES CIRP
DEVELOPS BUDGET
DEFENDS BUDGET
ORDERS ITEMS
INSTALL ITEMS
MANAGES CIRP PROCESS FOR VP
PREPARES ANNUAL IRM REPORTS



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